

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/635,486

Attorney Docket No.: FSF-031421

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A photothermographic material comprising a photosensitive silver halide, a reducing agent for reducing silver ions, a binder and a non-photosensitive organic silver salt, wherein the photosensitive silver halide has a silver iodide content ranging from 40 mol% to 100 mol%, and has a particle size ranging from 5 nm to ~~80~~ 50 nm, and wherein the non-photosensitive organic silver salt is prepared in the presence of the photosensitive silver halide which has been preformed, such that the non-photosensitive organic silver salt includes the photosensitive silver halide.
2. (original) The photothermographic material according to claim 1, wherein the non-photosensitive organic silver salt including the photosensitive silver halide is produced by adding an alkali metal salt to an organic acid to prepare an alkali metal soap of at least a part of the organic acid, mixing the prepared alkali metal soap with the photosensitive silver halide, and thereafter admixing therewith a water-soluble silver salt.
3. (original) The photothermographic material according to claim 1,

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wherein the non-photosensitive organic silver salt has a silver behenate content ranging from 40 mol% to 70 mol%.

4. (original) The photothermographic material according to claim 2, wherein the non-photosensitive organic silver salt has a silver behenate content ranging from 40 mol% to 70 mol%.

5. (original) The photothermographic material according to claim 1, wherein the binder is polyvinyl butyral.

6. (original) The photothermographic material according to claim 1, wherein methyl ethyl ketone is used as a solvent for a coating solution, and a residual amount of the methyl ethyl ketone ranges from 0.1 mg/m² to 150 mg/m².

7. (canceled)

8. (original) The photothermographic material according to claim 1, further comprising a compound selected from compounds of the following types 1 to 5:

(Type 1)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases two or more electrons through a bond cleaving reaction;

(Type 2)

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a compound that has two or more adsorptive groups to the silver halide in the same molecular structure and can be one-electron oxidized to produce a one-electron oxidation product which further releases one electron through a bond cleaving reaction;

(Type 3)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases additional one or more electrons after a bond forming process;

(Type 4)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases additional one or more electrons after an intra-molecular ring opening reaction; and

(Type 5)

a compound represented by X-Y, in which X represents a reducing group and Y represents a leaving group, wherein the reducing group X can be one-electron oxidized to produce a one-electron oxidation product, which leaves Y to produce X radical through an X-Y bond cleaving reaction, followed by releasing one more electrons from the X radical.

9. (original) The photothermographic material according to claim 2, further comprising a compound selected from compounds of the following types 1 to 5:

(Type 1)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases two or more electrons through

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a bond cleaving reaction;

(Type 2)

a compound that has two or more adsorptive groups to the silver halide in the same molecular structure and can be one-electron oxidized to produce a one-electron oxidation product which further releases one electron through a bond cleaving reaction;

(Type 3)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases additional one or more electrons after a bond forming process;

(Type 4)

a compound that can be one-electron oxidized to produce a one-electron oxidation product, which releases additional one or more electrons after an intra-molecular ring opening reaction; and

(Type 5)

a compound represented by X-Y, in which X represents a reducing group and Y represents a leaving group, wherein the reducing group X can be one-electron oxidized to produce a one-electron oxidation product, which leaves Y to produce X radical through an X-Y bond cleaving reaction, followed by releasing one more electrons from the X radical.

10. (original) The photothermographic material according to claim 1, further comprising a compound represented by formula (H):

Formula (H)

Q - (Y)_n - C(Z₁) (Z₂) X

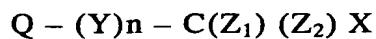
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wherein Q represents an alkyl group, an aryl group or a heterocyclic group; Y represents a bivalent linking group; n represents 0 or 1; Z₁ and Z₂ represent a halogen atom; and X represents a hydrogen atom or an electron attractive group.

11. (previously presented) The photothermographic material according to claim 2, further containing a compound represented by formula (H):

Formula (H)

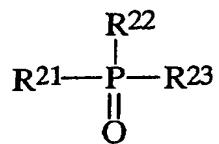


wherein Q represents an alkyl group, an aryl group or a heterocyclic group; Y represents a bivalent linking group; n represents 0 or 1; Z₁ and Z₂ represent a halogen atom; and X represents a hydrogen atom or an electron attractive group.

12. (original) The photothermographic material according to claim 1, wherein the reducing agent is a bisphenol-type reducing agent.

13. (original) The photothermographic material according to claim 1, further comprising a compound represented by formula (J):

Formula (J)



wherein R²¹ to R²³ each independently represent an alkyl group, an

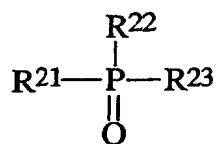
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aryl group, an alkoxy group, an aryloxy group, an amino group or a heterocyclic group.

14. (original) The photothermographic material according to claim 2, further comprising a compound represented by formula (J):

Formula (J)



wherein R²¹ to R²³ each independently represent an alkyl group, an aryl group, an alkoxy group, an aryloxy group, an amino group or a heterocyclic group.

15. (original) The photothermographic material according to claim 1, further comprising a development accelerator.

16. (original) The photothermographic material according to claim 2, further comprising a development accelerator.

17. (original) The photothermographic material according to claim 15, wherein the development accelerator is a hydrazine-based or naphthol-based compound.

18. (original) The photothermographic material according to claim 1,

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wherein the photosensitive silver halide has a silver iodide content ranging from 80 mol% to 100 mol%.

19. (original) The photothermographic material according to claim 1, wherein the photosensitive silver halide has a silver iodide content ranging from 85 mol% to 100 mol%.

20. (original) The photothermographic material according to claim 1, wherein the photosensitive silver halide has a silver iodide content ranging from 90 mol% to 100 mol%.

21. (new) A photothermographic material comprising a photosensitive silver halide, a reducing agent for reducing silver ions, a binder and a non-photosensitive organic silver salt, wherein the photosensitive silver halide has a silver iodide content ranging from 80 mol% to 100 mol% and a particle size ranging from 5 nm to 50 nm, a coating amount of the silver halide is from 0.5 to 15 mol% per 1 mol of the organic silver salt, and the non-photosensitive organic silver salt is prepared in the presence of the photosensitive silver halide which has been preformed, such that the non-photosensitive organic silver salt includes the photosensitive silver halide.